

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Review of Part 15 and other Parts of the)	ET Docket 01-278
Commission's Rules.)	RM-9375
)	RM-10051
)	

Comments of Loral Skynet

Loral Space & Communications Ltd. ("Loral") submits these comments in response to the above-captioned rulemaking and its request for information pertaining to the incidence of interference from radar detectors into very small aperture terminal ("VSAT"s) operating in the Ku band¹.

Loral Skynet, a subsidiary of Loral, operates the Telstar series satellites and offers Ku-band services to customers. Since the early 1990s, as terrestrial radar detection devices began to increase in number and to use new frequencies,² Loral Skynet and its predecessor, AT&T Skynet, have, on occasion, received complaints of interference from customers. In several cases, upon investigation, the source of the interference was found to be radar detector emissions. For example, an automobile rental company utilizing Skynet transponder capacity in its VSAT network was forced to relocate and shield several VSAT antennas that were mounted on poles located in their parking lots. Typically, these antennas were located in a corner of the customer's property. Such placement, however, also put antennas close to roadways. In such cases the

¹ NPRM @ ¶ 11 - 14

VSAT systems were subject to interference from radar detector emissions that appeared in the sidelobes of the antenna's radiation pattern when radar detector equipped vehicles passed by.

In another instance, a “pole mounted” antenna in a parking lot became inoperative, every day, when a car equipped with a radar detector parked outside the fence in front of the antenna. After investigation and the determination that an automobile radar detector was continually radiating the VSAT antenna, the network subscriber asked the owner to turn off his radar detector when he arrived at work. The owner refused. The individual also refused to accept assignment of a personal parking spot located away from the antenna.

The Commission's rules require that, when such devices cause interference:

The operator of a radio frequency device shall be required to cease operating the device upon notification by a Commission representative that the device is causing harmful interference. Operation shall not resume until the condition causing the harmful interference has been corrected.³

This rule is practically unenforceable with respect to radar detectors because: 1) the nature of radar detector interference is transient, 2) as unlicensed devices, there is no accountability for operation of the devices, 3) several generations of this type consumer product are still in use, and 4) individual drivers that operate unlicensed and interfering devices are hard to identify and in any event often have little knowledge of or concern for the fact of the interference problem and the nature and scope of the FCC rules that in theory apply to them.

Interference from radar detectors is not just a problem for VSAT networks. In 2001, Loral Skynet and one of its Telstar 5 customers, which was receiving interference into its television satellite news gathering (SNG) system, jointly investigated the source of the interference. This customer utilizes a 4.5 meter transmit/receive antenna located on a rooftop in

² See: *Satellite Video Transmission and the Analog to Digital Conversion Process*, pp. 1,5 Comsearch Report dated May 7,2001 for an explanation of scanning radar detectors and how they create interference into VSAT networks. This report is attached, as Exhibit 1, with permission from the publisher.

a large city to receive television feeds of stories from news trucks at locations in the United States, Puerto Rico, and the Virgin Islands. The interference was found to originate from radar detectors in cars parked in a multi-story parking garage located across the street. Many of the offending devices were connected to cigarette lighter plugs that remained powered when the automobile ignition was turned off. This resulted in long periods of interference until the automobiles containing the radar detectors left the garage.

Loral Skynet's customer sought the assistance of a company that specializes in identifying such interference. Although the contractor determined that this interference could be reduced to manageable levels by constructing shielding in front of the antenna between it and the parking garage, and, to date, this solution has worked, this effort was costly and time consuming for the satellite customer, which should not have to bear the burden of remedying the interference under the Commission's rules. This case also represents in some sense the easiest of cases. In many others cases, like the above-mentioned passing motorists using radar detectors that interfere with Ku-band satellite transmissions, there is no effective fix under the current system.

Loral Skynet cites these examples to demonstrate to the Commission that, while the NPRM specifically seeks comment on radar detector interference into VSAT networks, other Ku band systems, using larger antennas and operating with more robust carriers than those typically employed in VSAT networks, have endured long periods of uncontrollable interference from radar detectors operating in cars that were stationary. Further, because there is no practical accountability for such interfering operations, Skynet and its satellite customers have often gone to considerable expense to identify the cause of the problem and solve it in those cases in which a solution was even possible.

³ §15.5(c)

In discussions about this problem with customers, they have indicated that radar detectors also interfere with remote trucks when they are receiving news feeds. This proves to be a significant problem because the technicians on the truck(s) are unable to control the interference environment in the vicinity where such a truck may be parked.

Recommendations

Loral Skynet's analysis indicates that certain radar detectors radiate at levels far in excess of the field strength limits, 500 microvolts/meter, established in § 15.109 for unintentional radiators operating above 960 MHz. However this rule is not applicable to receivers, such as radar detectors that tune to frequencies above 960 MHz. Consequently, the field strength of signals emitted by such devices is not limited.

In order for radar detectors to be competitively priced in the consumer marketplace, they employ simple designs based on decades-old technology. These are poor designs that enable these "receiving" devices to unintentionally radiate at unbounded levels often approaching §15.249 limits for unlicensed intentional radiators operating above 960 MHz.

Loral Skynet strongly urges the Commission to act, without delay, to eliminate the loophole in §15.109 and, at a minimum, amend this rule to require that all radar detectors comply with the radiated emissions limitations found in section 15.109 paragraph (a). This recommendation will not completely eliminate the interference caused by radar detectors. It will, however, result in a significant reduction in the incidence of interference.

Further improvement can be achieved by reducing the emissions from unintentional radiators, including receivers, which radiate in frequency bands used for satellite downlinks, to an electric field strength that can be tolerated by VSAT systems widely available in the

marketplace. A more stringent limit will serve the public interest and will make it easier for satellite network service providers to better deliver enhanced communications to all Americans.

Respectfully submitted,

John Stern
Deputy General Counsel
Loral Space & Communications Ltd.
1755 Jefferson Davis Hwy, Suite 1007
Arlington, VA 22202
(703) 414 1060